

AMENDMENTS TO THE CLAIMS

1. (Currently amended) An isolated nucleic acid molecule that encodes a (-)-camphene synthase and that hybridizes to the complement of the portion of SEQ ID NO:3 extending from nucleotide 1560 to nucleotide 1694 under hybridization conditions of 3 X SSC at 65°C for 16 hours, followed by one wash in 0.5 X SSC at 55°C for 30 minutes, and wherein the (-)-camphene synthase comprises an amino terminal half and a carboxy terminal half, wherein the carboxy terminal half comprises amino acid sequence motif DDXXD.

2-6. (Canceled)

7. (Original) An isolated nucleic acid molecule of Claim 1 which encodes the amino acid sequence of SEQ ID NO:65.

8. (Previously presented) An isolated nucleic acid molecule of Claim 1 consisting of the sequence of SEQ ID NO:64.

9-66. (Canceled)

67. (Currently amended) A replicable expression vector comprising a nucleic acid sequence encoding a (-)-camphene synthase, wherein the nucleic acid sequence hybridizes to the portion of SEQ ID NO:3 extending from nucleotide 1560 to nucleotide 1694 under hybridization conditions of 3 X SSC at 65°C for 16 hours, followed by one wash in 0.5 X SSC at 55°C for 30 minutes, and wherein the (-)-camphene synthase comprises an amino terminal half and a carboxy terminal half, wherein the carboxy terminal half comprises amino acid sequence motif DDXXD.

68-74. (Canceled)

75. (Previously presented) A host cell comprising a vector of Claim 67.

76-81. (Canceled)

82. (Previously presented) A method of enhancing the production of a (-)-camphene synthase in a suitable host cell comprising introducing into the host cell an expression vector of Claim 67 under conditions enabling expression of the (-)-camphene synthase in the host cell.

83. (Original) The method of Claim 82 wherein said host cell is a plant cell.

84. (Original) The method of Claim 83 wherein said cell is from a plant selected from the group consisting of Brassica, cotton, soybean, safflower, sunflower, coconut, palm, wheat, barley, rice, corn, oats, amaranth, pumpkin, squash, sesame, poppy, grape, mung beans, peanut, peas, beans, broad beans, chick peas, lentils, radish, alfalfa, cocoa, coffee, tree nuts, spinach, culinary herbs, berries, stone fruit and citrus.

85. (Original) The method of Claim 83 wherein said plant cell is a seed cell.

86. (Original) The method of Claim 83 wherein said plant cell is a leaf cell.

87. (Original) Seed comprising a cell produced by the method of Claim 85.

88. (Original) Seed of Claim 87 selected from the group consisting of seed of Brassica, cotton, soybean, safflower, sunflower, coconut, palm, wheat, barley, rice, corn, oats, amaranth, pumpkin, squash, sesame, poppy, grape, mung beans, peanut, peas, beans, broad beans, chick peas, lentils, radish, alfalfa, cocoa, coffee and tree nuts.

89-90. (Canceled)

91. (Previously presented) An isolated nucleic acid molecule of Claim 1 wherein the isolated nucleic acid molecule hybridizes to the complement of the portion of SEQ ID NO:3 extending from nucleotide 1560 to nucleotide 1694 under hybridization conditions of 5 X SSC at 65°C for 16 hours, followed by two washes in 0.2 X SSC at 65°C for 20 minutes per wash.

92. (Previously presented) A replicable expression vector of Claim 67 wherein the nucleic acid sequence hybridizes to the complement of the portion of SEQ ID NO:3 extending from nucleotide 1560 to nucleotide 1694 under hybridization conditions of 5 X SSC at 65°C for 16 hours, followed by two washes in 0.2 X SSC at 65°C for 20 minutes per wash.

93. (Previously presented) A method of Claim 82 wherein said host cell is a prokaryotic cell.

94. (Previously presented) A method of Claim 82 wherein said host cell is a eukaryotic cell.

95. (Previously presented) A host cell of Claim 75 wherein said host cell is a prokaryotic cell.

96. (Previously presented) A host cell of Claim 75 wherein said host cell is a eukaryotic cell.

97. (Previously presented) A host cell of Claim 75 wherein said host cell is a plant cell.